UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,958	11/15/2001	Michael Baentsch	CH920000029	6674

	7590	08/26/2004

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EXAMINER
YIGDALL, MICHAEL J

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2001*.

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *11/15/01*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail. Date _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-16 are pending and have been examined. The priority date considered for the

application is November 15, 2000.

Oath/Declaration

2.   The oath or declaration is objected to because the specification to which the oath or

declaration is directed has not been adequately identified. See MPEP § 602. The intent may

have been to select "is attached hereto," however no indication has been made. Reference is

made to International App. No. PCT/US00/02716, which has been published as International

Pub. No. WO 00/46667 and is owned by another assignee. A new oath or declaration in

compliance with 37 CFR 1.67(a) identifying this application by application number and filing

date is requested. See MPEP §§ 602.01 and 602.02.

Drawings

3.   Figure 1 should be designated by a legend such as --Prior Art-- because only that which is

old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the application. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4.   The disclosure is objected to because of the following informalities: The specification

refers to "constant pool 20" in Figure 2, rather than --constant pool 30-- as illustrated in the

drawings (see pages 7-9). The specification also refers to "Figure 3" where it is perhaps directed

instead toward --Figure 4-- (see page 10, line 5). Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6.   Claims 1, 5, 8, 12 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by

International Pub. No. WO 00/46667 to Schwabe et al. (hereinafter "Schwabe").

With respect to claim 1, Schwabe discloses a Java run-time system (see page 1, lines 27-

29, which shows a Java virtual machine or run-time system) comprising:

(a) a stacked-based interpreter for executing a Java program comprising Java bytecode

instructions and Java class structures (see page 6, lines 18-20, which shows an interpreter for

executing Java programs, and page 1, lines 19-26, which shows that the programs comprise Java

bytecode instructions and class structures);

(b) a converter for mapping standard Java symbolic linking strings contained in a

downloaded Java program onto linking identifiers (see page 8, lines 17-27, which shows a

converter for mapping symbolic names or strings to tokens or identifiers); and

(c) an export table for storing linking identifiers generated by the converter to bind a

reference in a bytecode instruction to be executed to a corresponding link target (see page 8,

lines 12-15, which shows an export component or table for storing the tokens or identifiers and

linking or binding a reference).

With respect to claim 5, Schwabe further discloses said run-time system being ported on

an embedded microcontroller of a smart card (see page 2, lines 7-17, which shows porting the

run-time system on an embedded processor or microcontroller of a smart card).

With respect to claim 8, the limitations recited in the claim are analogous to those of

claim 1 (see the rationale applied to claim 1 above).

With respect to claim 12, the limitations recited in the claim are analogous to those of

claim 1 (see the rationale applied to claim 1 above).

With respect to claim 16, the limitations recited in the claim are analogous to those of

claim 5 (see the rationale applied to claim 5 above).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 2-4, 6, 7, 9-11, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwabe, as applied to claims 1, 8 and 12 above, respectively, in view of U.S. Pat. No. 5,764,987 to Eidt et al. (hereinafter "Eidt").

With respect to claim 2, although Schwabe discloses that the converter uses a function to assign the tokens or identifiers (see page 14, line 27 to page 15, line 7) to which the symbolic names or strings are mapped (see page 8, lines 17-27), Schwabe does not expressly disclose the limitation wherein the converter is adapted to use a hash function to map the standard Java symbolic linking strings onto linking identifiers.

However, Eidt discloses symbol import and export tables for linking references to objects in memory at run-time (see column 2, lines 1-34), wherein a hash function is used to locate the export symbols (see column 12, lines 5-27). Hashing the export symbols considerably increases the speed of searching for and importing the symbols (see column 11, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the converter of Schwabe with a hash function, as taught by Eidt, to increase the speed of mapping the symbolic names or strings to the tokens or identifiers.

With respect to claim 3, Schwabe in view of Eidt further discloses the limitation wherein the converter is adapted to use a parameterized hash function to map the standard Java symbolic linking strings onto linking identifiers, the parameter being contained in the Java program to be

downloaded (see Eidt, column 13, lines 13-35, which shows that the hash function is

parameterized with parameters contained in the program).

With respect to claim 4, Schwabe in view of Eidt further disclose a Java development kit

comprising the Java run-time system (see Schwabe, page 7, lines 3-7, which shows Java software

development kits) and a Java conversion system for calculating a parameter for standard Java

symbolic linking strings of a Java program to be downloaded on the Java run-time system (see

Schwabe, page 10, lines 15-21, which shows a conversion system for determining parameters of

the linking information of a Java program to be downloaded).

With respect to claim 6, the limitations recited in the claim are analogous to those of

claim 5 (see the rationale applied to claim 5 above).

With respect to claim 7, the limitations recited in the claim are analogous to those of

claim 5 (see the rationale applied to claim 5 above).

With respect to claim 9, the limitations recited in the claim are analogous to those of

claim 2 (see the rationale applied to claim 2 above).

With respect to claim 10, the limitations recited in the claim are analogous to those of

claim 3 (see the rationale applied to claim 3 above).

With respect to claim 11, Schwabe in view of Eidt does not expressly disclose the

limitation wherein the parameter for the Java program to be downloaded is used to ensure that

the hash function does not map two symbolic linking strings of the Java program to the same

linking identifier.

However, Schwabe further discloses assigning tokens or identifiers in such a way as to

ensure that two symbolic names or strings are not mapped to the same identifier (see page 14,

line 27 to page 15, line 7).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to use a parameter to ensure that the hash function does not map two symbolic linking

strings of the Java program to the same linking identifier, as taught by Schwabe, for the purpose

of avoiding any penalty that could otherwise result from a hash collision (see Eidt, column 12,

line 66 to column 13, line 2).

With respect to claim 13, the limitations recited in the claim are analogous to those of

claim 2 (see the rationale applied to claim 2 above).

With respect to claim 14, the limitations recited in the claim are analogous to those of

claim 3 (see the rationale applied to claim 3 above).

With respect to claim 15, the limitations recited in the claim are analogous to those of

claim 11 (see the rationale applied to claim 11 above).

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to Applicant's

disclosure. U.S. Pat. No. 6,430,570 to Judge et al. discloses a system for managing Java

applications in embedded devices. U.S. Pat. No. 5,815,718 to Tock discloses a method and

system for loading classes in read-only memory. U.S. Pat. No. 6,338,160 to Patel et al. discloses

a method for resolving references to the constant pool. International Pub. No. WO 99/49392 to

Baentsch et al. discloses a Java run-time system with a modified constant pool.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael J. Yigdall whose telephone number is (703) 305-0352.

The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam can be reached on (703) 305-4552. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                                            Michael J. Yigdall
                                          𝓜Y   Examiner
                                                            Art Unit 2122

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                                        TUAN DAM
                              SUPERVISORY PATENT EXAMINER